CURRICULUM VITAE

NAME: Dr. Herbert McKennis, Jr.

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EDUCATION:

Institute and Location	Degree	Year Conferred	Field of Study
Harvard College, Cambridge, Mass.	S.B.	1938	Chemistry
Polytechnic Institute of Brooklyn			Organic Chemistry
Cornell University Medical College, New York	Ph.D.	1945	Biochemistry Physiology Pharmacology

PROFESSIONAL EXPERIENCE:

1938-1939 Research Chemist, Nuodex Products Company, Elizabeth, New Jersey

1940-1942 Head, Analytical Department, Ciba Pharmaceutical Products, Summit, New Jersey

1942-1945	Assistant in Biochemistry, Cornell University Medical College
1945-1946	Assistant Professor of Chemistry, Medical College of Virginia
1946-1948	Instructor in Physiological Chemistry, School of Medicine, Johns Hopkins University
1948-1949	Associate Professor of Biochemistry, Medical College of Virginia
1949-1953	Head, Basic Sciences Research Dept., Naval C.E. Research and Evaluation Laboratory, Port Hueneme, California and Solomons, Maryland
1953-1955	Associate Professor of Research Pharmacology, Medical College of Virginia
1955-1979	Professor of Pharmacology, Medical College of Virginia
1960-	Visiting Professor, Institute of Physiology, University of Chile
1966-1967	Consultant, Surgeon General's Committee on Smoking and Health
1976-1978	Scientific Advisor to Governor, Commonwealth of Virginia
1973-1979	Head, Division of Biochemical Pharmacology, Medical College of Virginia

SELECTED AWARDS:

Honorary Member, Medical Faculty, University of Chile (Life)
Honorary Member, Sociedad de Biologia, Santiago (Life)
Meritorious Service Award, U.S. Navy Department
Membership Activity Awards, U.S. Coast Guard Auxiliary

Publications -- Herbert McKennis, Jr.

Pentahydrate of 2-(p-aminobenzenesulfonamido)-thiazole sodium salt.
Herbert McKennis, Jr.
Journal of the American Chemical Society, 63, 631,(1941).

Synthesis of a second isomeric form of 3,4-diaminotetrahydrothiophene.
Glenn W. Kilmer and Herbert McKennis, Jr.
The Journal of Biological Chemistry, 152, 103, (1944).

The inhibition of the growth of yeast by thienylalanine.
Vincent du Vigneaud, Herbert McKennis, Jr., Sofia Simmonds, Karl Dittmer, and George Bosworth Brown.
The Journal of Biological Chemistry, 159, 385, (1945).

The effect of amino acids on the microbial growth inhibition produced by thienylalanine.
Karl Dittmer, Glenn Ellis, Herbert McKennis, Jr., and Vincent du Vigneaud.
The Journal of Biological Chemistry, 164, 761, (1946).

The synthesis of homodesthiobiotin and related compounds.
Herbert McKennis, Jr., and Vincent du Vigneaud.
Journal of the American Chemical Society, 68, 832, (1946).

The growth-promoting activity of cholesterol and related compounds in black carpet beetle larvae.
Herbert McKennis, Jr.
The Journal of Biological Chemistry, 167, 645, (1947).

The cholesterol-i-cholesterol isomerization.
Herbert McKennis, Jr.
Journal of the American Chemical Society, 69, 2565, (1947).

The formation of cholesterol from i-cholesteryl methyl ether.
Herbert McKennis, Jr.
The Journal of Biological Chemistry, 172, 313, (1948).

Some reactions of cholesteryl p-toluenesulfonate.
Herbert McKennis, Jr.
Journal of the American Chemical Society, 70, 675, (1948).

Reactions of mustard-type vesicants with α-amino acids.
Vincent du Vigneaud, Carl M. Stevens, Harold F. McDuffie, Jr., John L. Wood, and Herbert McKennis, Jr.
Journal of the American Chemical Society, 70, 1620, (1948).

1 Studies of the effect of mustard-type vesicants on the phenol color reaction of proteins.
Carl M. Stevens, Herbert McKennis, Jr., and Vincent du Vigneaud.
Journal of the American Chemical Society, 70, 2556, (1948).

2. A synthesis of allocholesterol and epiallocholesterol.
Herbert McKennis, Jr. and George W. Gaffney.
The Journal of Biological Chemistry, 175, 217, (1948).

3. Rate and mechanism of the Liebermann-Burchard reaction on various derivatives of cholesterol.
Herbert McKennis, Jr., Joseph Y. Thomas, and J. C. Forbes.
Federation Proceedings, 8, 222, (1949).

4. The reaction of certain substituted furfurals with aniline and aniline hydrochloride.
Richard W. Drisko and Herbert McKennis, Jr.
Journal of the American Chemical Society, 74, 2626, (1952).

5. The mechanism of the reaction of aniline with furfural in the presence of acid.
William M. Foley, Jr., Guy E. Sanford, and Herbert McKennis, Jr.
Journal of the American Chemical Society, 74, 5489, (1952).

6. Curare-like activity of rodiasine dimethoiodide and related compounds.
Merle H. Pindell, Herbert McKennis, Jr., and Sally K. Womack.
The Journal of Pharmacology and Experimental Therapeutics, 113, 43, (1955).

7. Studies on the excretion and transfer of hydrazine and metabolites.
Herbert McKennis, Jr., Lloyd B. Witkin, and Jesse H. Weatherby.
The Journal of Pharmacology and Experimental Therapeutics, 113, 37, (1955).

8. Growth-promoting and inhibiting activity of cholesterol derivatives for Attagenus piceus "yellows".
Herbert McKennis, Jr.
Proceedings of the Society for Experimental Biology and Medicine, 87, 289, (1954).

9. Reaction of acetaldehyde with 5,5-dimethyl-1,3-cyclohexanedione.
George W. Gaffney, William A. Williams, and Herbert McKennis, Jr.
Analytical Chemistry, 26, 588, (1954).

The production of fatty livers in rabbits by isoniazid and other hydrazine derivatives.
Herbert McKennis, Jr., Allan S. Yard and Elizabeth V. Pahnelas.
The American Review of Tuberculosis and Pulmonary Diseases, 73, 956, (1956).

The effect of acylation on the biological activity of hydrazino compounds.
Herbert McKennis, Jr. and Jesse H. Weatherby.
The Virginia Journal of Science, 7, 332, (1956).

Studies on acylation and deacylation of hydrazine compounds.
Allan S. Yard, Herbert McKennis, Jr. and J. H. Weatherby.
The Journal of Pharmacology and Experimental Therapeutics, 119, 195, (1957).

Formation and hydrolysis of γ-glutamylhydrazide.
Allan S. Yard, J. H. Weatherby and Herbert McKennis, Jr.
Federation Proceedings, 16, 275, (1957).

Metabolism of glycerol esterified with palmitic and lactic acid.
Herbert McKennis, Jr., L. B. Turnbull, Harvey B. Haag and Paul S. Larson.
Federation Proceedings, 16, 320, (1957).

Synthesis and properties of pyridylalanines.
Herbert McKennis, Jr. and Edward R. Bowman.
The Virginia Journal of Science, 8, 314, (1957).

Manometric determinations of hydrazine and hydrazides.
Herbert McKennis, Jr. and J. H. Weatherby.
The Virginia Journal of Science, 8, 348, (1957).

Metabolism of γ-(3-pyridyl)-γ-oxobutyric acid.
Lennox B. Turnbull, Edward R. Bowman and Herbert McKennis, Jr.
Federation Proceedings, 17, 325, (1958).

Hydrolysis of acetylisoniazid in vivo.
Allan S. Yard and Herbert McKennis, Jr.
Federation Proceedings 17, 421, (1958).

γ-(3-Pyridyl)-γ-methylaminobutyric acid as a urinary metabolite of nicotine.
Herbert McKennis, Jr., Lennox B. Turnbull, and Edward R. Bowman.
Journal of the American Chemical Society, 79, 6342, (1957).

0. Gasometric determination of hydrazine and derivatives.
Herbert McKennis, Jr., Jesse H. Weatherby and Elizabeth P. Dellis.
Analytical Chemistry, 30, 499, (1958).

1. Metabolism of lactic acid and glycerol in C^{14}-glyceryl lactopalmitate.
Herbert McKennis, Jr., L. B. Turnbull, H. B. Haag and P. S. Larson.
Proceedings of the Society for Experimental Biology and Medicine, 97 498, (1958).

2. Metabolites of nicotine and a synthesis of nornicotine.
Herbert McKennis, Jr., Lennox B. Turnbull, Harvey N. Wingfield, Jr. and Lovell J. Dewey.
Journal of the American Chemical Society, 80, 1634, (1958).

3. Metabolism of nicotine to (+)-γ-(3-pyridyl)-γ-methylaminobutyric acid.
Herbert McKennis, Jr., Lennox B. Turnbull and Edward R. Bowman.
Journal of the American Chemical Society, 80, 6597, (1958).

4. A constant-rate infusion apparatus.
Quentin S. McKennis, Edward R. Bowman and Herbert McKennis, Jr.
Toxicology and Applied Pharmacology, 1, 61, (1959).

5. Meso and dl-2,3-diaminosuccinic acids.
Herbert McKennis, Jr. and Allan S. Yard.
Journal of Organic Chemistry, 23, 980, (1958).

6. The role of cotinine in nicotine metabolism.
H. McKennis, Jr., L. B. Turnbull and E. R. Bowman.
Abstracts of Communications, IV. International Congress of Biochemistry, Austria, Sept. 1-6, 1958, p. 79.

7. Oxidation of cotinine in vivo.
Edward R. Bowman, Lennox B. Turnbull and Herbert McKennis, Jr.
Federation Proceedings, 18, 371, (1959).

8. Demethylation of cotinine in vivo.
Herbert McKennis, Jr., Lennox B. Turnbull, Edward R. Bowman, and Einosuke Wada.
Journal of the American Chemical Society, 81, 3951, (1959).

9. Acetylation of hydrazine and the formation of 1,2-diacetylhydrazine in vivo.
Herbert McKennis, Jr., Allan S. Yard, Jesse H. Weatherby and J. Albert Hagy.
The Journal of Pharmacology and Experimental Therapeutics, 126, 109, (1959).

50. Metabolism of nicotine in the human and excretion of pyridine compounds by smokers.
Edward R. Bowman, Lennox B. Turnbull, and Herbert McKennis, Jr.
The Journal of Pharmacology and Experimental Therapeutics, 127, 92 (1959).

51. On the congeners of whiskey.
Herbert McKennis, Jr. and Harvey B. Haag.
Journal of the American Geriatrics Society, 7, 848 (1959).

52. Depressor effects arising from (-)-cotinine.
Joseph F. Borzelleca, Edward R. Bowman, and Herbert McKennis, Jr.
The Pharmacologist, 2, 72 (1960).

53. The excretion and metabolism of nicotine.
Herbert McKennis, Jr.
Annals of the New York Academy of Sciences, 90, 36 (1960).

54. The isolation and structure of a ketoamide formed in the metabolism of nicotine.
Herbert McKennis, Jr., Edward R. Bowman, and Lennox B. Turnbull.
Journal of the American Chemical Society, 82, 3974 (1960).

55. Methylation in the metabolism of (-)-nicotine.
Lennox B. Turnbull, Edward R. Bowman, and Herbert McKennis, Jr.
Federation Proceedings, 19, 268 (1960).

56. L-γ-Glutamylhydrazine and the metabolism of hydrazine.
Herbert McKennis, Jr., Allan S. Yard, Elizabeth J. Adair, and J. H. Weatherby.
The Journal of Pharmacology and Experimental Therapeutics, 131, 152 (1961).

57. Demethylation in the metabolism of (-)-nicotine in vivo.
Herbert McKennis, Jr., Einosuke Wada, Edward R. Bowman, and Lennox B. Turnbull.
Nature, 190, 910 (1961).

58. Norcotinine (Desmethylcotinine) as a urinary metabolite of nornicotine.
Einosuke Wada, Edward R. Bowman, Lennox B. Turnbull, and Herbert McKennis, Jr.
Journal of Medicinal and Pharmaceutical Chemistry, 4, 21 (1961).

59. The isolation of 3-pyridylacetic acid, a urinary metabolite of (-)-cotinine.
Edward R. Bowman, Lennox B. Turnbull, and Herbert McKennis, Jr.
Abstracts of Papers, 14th Tobacco Chemists' Research Conference, Oct. 13-14, 1960, Winston-Salem, North Carolina.

60. Oxidation of nicotine-C^{14} and nicotine-methyl-C^{14} *in vivo*.
Lennox B. Turnbull, Einosuke Wada, Edward R. Bowman, and Herbert McKennis, Jr.
Federation Proceedings, 20, 172 (1961).

61. Inhibition by thyroxine of γ-aminobutyrate-α-ketoglutarate transaminase.
Antonio Horvath, Fernando Orrego, and Herbert McKennis, Jr.
Federation Proceedings, 20, 5 (1961).

62. Factors controlling the metabolism of γ-aminobutyric acid.
Antonio Horvath, Fernando Orrego, and Herbert McKennis, Jr.
The Journal of Pharmacology and Experimental Therapeutics, 134, 222 (1961).

63. Mammalian degradation of (-)-nicotine to 3-pyridylacetic acid and other compounds.
Herbert McKennis, Jr., Edward R. Bowman, and Lennox B. Turnbull.
Proceedings of the Society for Experimental Biology and Medicine, 107, 145 (1961).

64. Selective toxicity. (Book review).
Herbert McKennis, Jr.
Revista Medica de Chile, 88, 864 (1960).

65. Los oxoesteroides, el uso de hidrazidos fenólicos para su detección, caracterización y medición. (Book review).
Herbert McKennis, Jr.
Revista Medica de Chile, 88, 626 (1960).

66. Metabolism of nicotine in the human.
Edward R. Bowman, Lennox B. Turnbull, and Herbert McKennis, Jr.
The Virginia Journal of Science, 9, 438 (1958).

67. Metabolism of (-)-cotinine in the rat.
Sorell L. Schwartz, Edward R. Bowman, and Herbert McKennis, Jr.
The Virginia Journal of Science, 12, 196 (1961).

68. Degradation of (-)-cotinine in the human.
Herbert McKennis, Jr. and Edward R. Bowman.
Abstracts of Communications, V. International Congress of Biochemistry, Moscow, August 10-16, 1961, p. 393.

69. Aspects of the metabolism of isoniazid and acetylisoniazid in the human and the dog.
Allan S. Yard and Herbert McKennis, Jr.
Journal of Medicinal and Pharmaceutical Chemistry, 5, 196 (1962).

70. Demethylation in the metabolism of (-)-nicotine.
Herbert McKennis, Jr., Lennox B. Turnbull, Sorell L. Schwartz, Einosuke Tamaki, and Edward R. Bowman.
The Journal of Biological Chemistry, 237, 541 (1962).

71. Inhibition of the catabolism of aspartic-4-C^{14} acid by thyroxine in vivo.
Antonio Horvath and Herbert McKennis, Jr.
Enzymologia, 24, 91 (1962).

72. Studies on the metabolism of (-)-cotinine in the human.
Edward R. Bowman and Herbert McKennis, Jr.
The Journal of Pharmacology and Experimental Therapeutics, 135, 306 (1962).

73. Metabolism of (-)-cotinine to a keto acid.
Sorell L. Schwartz and Herbert McKennis, Jr.
Federation Proceedings, 21, 183 (1962).

74. The excretion and metabolism of triethylene glycol.
Herbert McKennis, Jr., Robert A. Turner, Lennox B. Turnbull, and Edward R. Bowman.
W. W. Muelder, M. P. Neidhardt, and Carl L. Hake.
Richard Henderson, Herbert G. Nadaeu, and Samuel Spencer.
Toxicology and Applied Pharmacology, 4, 411 (1962).

75. Studies on the respiratory and cardiovascular effects of (-)-cotinine.
Joseph F. Borzelleca, Edward R. Bowman, and Herbert McKennis, Jr.
The Journal of Pharmacology and Experimental Therapeutics, 137, 313 (1962).

76. Routes in the mammalian metabolism of (-)-nicotine to 3-pyridylacetic acid.
Sorell L. Schwartz, Edward R. Bowman, and Herbert McKennis, Jr.
Abstracts of Papers, 16th Tobacco Chemists' Research Conference, Sept. 26-28, 1962, Richmond, Virginia, p. 7.

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77. Studies on the metabolic fate of 3-acetylpyridine.
Lennox B. Turnbull, Edward R. Bowman, and Herbert McKennis, Jr.
Abstracts of Papers, 16th Tobacco Chemists' Research Conference, Sept. 26-28, 1962, Richmond, Virginia, p. 6.

78. Acetylhydrazine as an intermediate in the metabolism of aroylhydrazines.
Lennox B. Turnbull, Allan S. Yard, and Herbert McKennis, Jr.
Journal of Medicinal and Pharmaceutical Chemistry, 5, 1327 (1962).

79. N-methylation of nicotine and cotinine in vivo.
Herbert McKennis, Jr., Lennox B. Turnbull, and Edward R. Bowman.
The Journal of Biological Chemistry, 238, 719 (1963).

80. The synthesis of hydroxycotinine and studies on its structure.
Herbert McKennis, Jr., Lennox B. Turnbull, Edward R. Bowman, and Einosuke Tamaki.
Journal of Organic Chemistry, 28, 383 (1963).

81. The corrected structure of a ketoamide arising from the metabolism of (-)-nicotine.
Herbert McKennis, Jr., Edward R. Bowman, Lennox B. Turnbull, and Sorell L. Schwartz.
Journal of the American Chemical Society, 84, 4598 (1962).

82. (-)-Cotinine.
Edward R. Bowman and Herbert McKennis, Jr.
Biochemical Preparations, 10, 36 (1963).

83. Studies on the degradation of the pyrrolidine ring of (-)-nicotine in vivo.
Formation of γ-(3-pyridyl)-γ-oxobutyric acid.
Sorell L. Schwartz and Herbert McKennis, Jr.
The Journal of Biological Chemistry, 238, 1807 (1963).

84. Conjugate formation in the metabolism of 3-acetylpyridine.
Lennox B. Turnbull, Edward R. Bowman, and Herbert McKennis, Jr.
Abstracts of Papers, 17th Tobacco Chemists' Research Conference, Sept. 22-25, 1963, Montreal, Quebec, p. 11.

85. Metabolic release of methyl groups from a series of N-methylpyridinium compounds.
Herbert McKennis, Jr., Edward R. Bowman, Antonio Horvath, and John P. Bederka, Jr.
Nature, 202, 699 (1964).

86. Mammalian degradation of (-)-demethylcotinine.
Sorell L. Schwartz and Herbert McKennis, Jr.
Nature, 202, 594 (1964).

87. Disposition and fate of (-)-cotinine-H^3 in the mouse.
Edward R. Bowman, Eskil Hansson, Lennox B. Turnbull,
Herbert McKennis, Jr., and Carl Schmiterlöw.
The Journal of Pharmacology and Experimental Therapeutics,
143, 301 (1964).

88. Additional routes in the metabolism of 3-acetylpyridine.
Herbert McKennis, Jr., Lennox B. Turnbull, and Edward R. Bowman.
The Journal of Biological Chemistry, 239, 1215 (1964).

89. The metabolic formation of γ-(3-pyridyl)-γ-hydroxybutyric acid and its possible intermediary role in the mammalian metabolism of nicotine.
Herbert McKennis, Jr., Lennox B. Turnbull, Sorell L. Schwartz,
Einosuke Tamaki, and Edward R. Bowman.
The Journal of Biological Chemistry, 239, 3981 (1964).

90. Alternate routes in the metabolic degradation of the pyrrolidine ring of nicotine.
Herbert McKennis, Jr., Sorell L. Schwartz, and Edward R. Bowman.
The Journal of Biological Chemistry, 239, 3990 (1964).

91. Effect of cotinine and other nicotine metabolites in vitro on duodenum and ileum segments.
K. S. Kim, Joseph F. Borzelleca, Edward R. Bowman, and
Herbert McKennis, Jr.
Federation Proceedings, 23, 330 (1964).

92. Metabolism of 3-acetylpyridine to an analog of mandelic acid.
Lennox B. Turnbull, C. N. Lukhard, and Herbert McKennis, Jr.
Toxicology and Applied Pharmacology, 6, 362 (1964).

93. Disposition and fate of nicotine in animals.
Herbert McKennis, Jr.
Tobacco Alkaloids and Related Compounds, U. S. Von Euler,
editor, Pergamon Press, Oxford, 1965, p. 53.

94. Viewpoints on the study of drug toxicity. (Book review)
Herbert McKennis, Jr.
American Journal of Pharmaceutical Education, 28, 469 (1964).

95. Urinary excretion of conjugate forms of 1-(3-pyridyl)ethanol after administration of 3-acetylpyridine.
Herbert McKennis, Jr., Lennox B. Turnbull, Edward R. Bowman, and C. Norman Lukhard.
The Journal of Biological Chemistry, 241, 1878 (1966).

96. The structure of dibromoticonine, a bromination product of nicotine.
Herbert McKennis, Jr., Edward R. Bowman, L. D. Quin, and R. C. Denney
Abstracts of Papers, 152nd Meeting, American Chemical Society, New York, N. Y., September 12-16, 1966.

97. Studies on the synthesis and metabolism of 4-(3-pyridyl)-4-methylaminobutyric acid-4-^{14}C.
Paolo L. Morselli, Edward R. Bowman, Helen H. Ong, and Herbert McKennis, Jr.
Virginia Journal of Science, 17, 345 (1966).

98. The fate and distribution of 1-(3-pyridyl)ethanol methiodide in relation to the toxicity of 1-(3-pyridyl)ethanol and 3-acetylpyridine.
John P. Bederka, Jr., Eskil Hansson, Edward R. Bowman, and Herbert McKennis, Jr.
Biochemical Pharmacology, 16, 1 (1967).

99. Pharmacological action and intermediary role of 5-(3-pyridyl)tetrahydrofuranone-2
Edward R. Bowman, Pavol Hrdina, and Herbert McKennis, Jr.
Federation Proceedings, 26, 616 (1967).

100. Studies on the separation of acidic metabolites of nicotine by gas chromatography.
Herbert McKennis, Jr., Edward R. Bowman, and Mohammad Saeed Dar.
Virginia Journal of Science, 18, 13 (1967).

101. Metabolism of (±)-cotinine-2-^{14}C in the rat.
Paolo L. Morselli, Helen H. Ong, Edward R. Bowman, and Herbert McKennis, Jr.
Journal of Medicinal Chemistry, 10, 1033 (1967).

102. Methylamine metabolism in normal and MAO-inhibitor-treated rats.
Paolo L. Morselli, Edward R. Bowman, and Herbert McKennis, Jr.
The Pharmacologist, 9, 228 (1967).

103. Pentafluoropropionylation in the determination of nicotine.
Herbert McKennis, Jr., S. C. Srivastave, and Edward R. Bowman.
Virginia Journal of Science, 18, 200 (1967).

104. Effects of some nicotine metabolites and related compounds on isolated smooth muscle.
K. S. Kim, Joseph F. Borzelleca, Edward R. Bowman, and Herbert McKennis, Jr.
The Journal of Pharmacology and Experimental Therapeutics, 161, 59 (1968).

105. Application of the Pinner-Etard reaction to studies on nicotine metabolism.
E. R. Bowman, S. C. Srivastava, and H. McKennis, Jr.
Abstracts of Papers, 22nd Tobacco Chemists Research Conference, October 17-19, 1968, Richmond, Virginia, p. 23.

106. Studies on the possible role of methylurea in the metabolism of nicotine.
M. S. Dar, P. L. Morselli, E. R. Bowman, and H. McKennis, Jr.
Abstracts of Papers, 22nd Tobacco Chemists Research Conference, October 17-19, 1968, Richmond, Virginia, p. 23.

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107. Gaddum's Pharmacology (a book review)
Herbert McKennis, Jr.
American Journal of Pharmaceutical Education, 33, 234 (1968).

108. The intermediary role of methylurea in the metabolism of methylamine.
M. Saeed Dar, Edward R. Bowman, and Herbert McKennis, Jr.
Medical College of Virginia, Richmond, Virginia
Federation Proceedings 28, 545 (1968.

109. Metabolic conversion of betahistine to 2-pyridylacetic acid in the rabbit.
Faye J. Bowman, Edward R. Bowman, and Herbert McKennis, Jr.
The Pharmacologist, 12(2), 1970.

110. Urinary excretion of a carboxylic acid following administration of terrazole, 3-trichloromethyl-5-ethoxy-1,2,4-thiadiazole.
Edward R. Bowman, M. S. Dar, and Herbert McKennis, Jr.
Virginia Journal of Science, 21, 143 (1970).

111. Studies on the oxidative degradation of betahistine (Serc) in the rabbit.
Faye J. Bowman, Edward R. Bowman, and Herbert McKennis, Jr.
Virginia Journal of Science, 21, 143 (1970).

112. Methylamine and methylurea -- Their metabolic interrelationships.
M. S. Dar
Virginia Journal of Science, 21, 144 (1970).

113. On the vasodilator effect of betahistine (Serc) and related substances in the perfused foreleg of the dog.
H. Konzett, and R. Bost.
Virginia Journal of Science, 21, 146 (1970).

114. Further studies on the Pinner-Etard reaction as related to the metabolism of nicotine.
Margaret M. Rich, Roger H. Meacham, Jr., Edward R. Bowman, and Herbert McKennis, Jr.
Virginia Journal of Science, 21, 147 (1970).

115. Metabolic degradation of dihydrometanicotine in the rat.
Roger H. Meacham, Jr., Edward R. Bowman and Herbert McKennis, Jr.
Abstracts of Papers, 24th Tobacco Chemists Research Conference, Montreal, Canada, October 28-30, 1970, p. 18.

116. Betahistine, its metabolites, and vascular responses in the forelimb of the dog.
Heribert Konzett, Robert G. Bost, Faye J. Bowman, Edward R. Bowman, and Herbert McKennis, Jr.
The Journal of Pharmacology and Experimental Therapeutics, 178(1), 122-129, 1971.

117. Pharmacological action and intermediary role of 5-(3-pyridyl)tetrahydrofuranone-2.
Edward R. Bowman, Pavol Hrdina, and Herbert McKennis, Jr.
Federation Proceedings 26, 616 (1967).

118. Synthesis of nicotine metabolites from brominated derivatives of nicotine.
Herbert McKennis, Jr., Edward R. Bowman, Lennox B. Turnbull, and Sorell L. Schwartz.
Proceedings, Ninth Latin American Chemical Congress, San Juan, Puerto Rico, August 1-8, 1965, p. 102.

119. Metabolism of Serc-^{14}C-methyl in the rabbit.
Faye J. Bowman, Edward R. Bowman, and Herbert McKennis, Jr.
Federation Proceedings, 30, 336 (1971).

120. Metabolites of Serc and interaction of Serc with antihistamines.
Herbert McKennis, Jr.
Acta Oto-Laryngologica, Supplement 305, p. 22-28 (1972).

121. Additional routes in the metabolism of nicotine to 3-pyridylacetate.
R. H. Meacham, Jr., E. R. Bowman, and H. McKennis, Jr.
Virginia Journal of Science, 22, 133 (1971).

122. Peripheral vascular effects of dihydrometanicotine.
Robert G. Bost and Herbert McKennis, Jr.
Abstracts of Papers, Society for Experimental Biology and Medicine, Southeastern Section, University of Miami, Coral Gables, Florida, January 12, 1972, p. 6.

123. Additional routes in the metabolism of nicotine to 3-pyridylacetate.
Roger H. Meacham, Jr., Edward R. Bowman, and Herbert McKennis, Jr.
The Journal of Biological Chemistry, 247, 902-908 (1972).

124. Possible alternate routes in the metabolism of betahistine (Serc) in the rabbit.
Edward R. Bowman, Faye J. Bowman, and Herbert McKennis, Jr.
Abstracts of Volunteer Papers, Fifth International Congress on Pharmacology, San Francisco, California, July 23-28, 1972, p. 27.

125. Possible role of nicotine isomethonium ion in physiological response to nicotine.
Robert G. Bost and Herbert McKennis, Jr.
Federation Proceedings, 31, 541 (1972).

126. Possible alternate routes in the metabolism of betahistine in the rabbit.
Faye J. Bowman, Edward R. Bowman, and Herbert McKennis, Jr.
Proceedings of the Society for Experimental Biology and Medicine, 140, 1385-1388 (1972).

127. Isomers of metanicotine and the Pinner-Etard reaction.
C. T. Sprouse, R. H. Meacham, Jr., E. R. Bowman, and H. McKennis, Jr.
Abstracts of Papers, Information Bulletin, CORESTA/TCRC Joint Conference, Williamsburg, Virginia, October 22-28, 1972, p. 32.

128. Pyridyl acids from the mammalian metabolism of trans-metanicotine.
Roger H. Meacham, Jr., C. T. Sprouse, Edward R. Bowman, and Herbert McKennis, Jr.
Federation Proceedings, 32, 511 (1973).

29. Adrenergic activity of 3-(2-methylaminoethyl)pyridine.
Robert G. Bost, Raymond S. L. Chang, C. T. Sprouse, Edward R. Bowman, and Herbert McKennis, Jr.
Federation Proceedings, 32, 705 (1973).

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130. N-3-Pyridylacetylglycine as a Nicotine Metabolite. Edward R. Bowman, Raymond S. L. Chang, C. T. Sprouse, and Herbert McKennis, Jr. Abstracts of Papers, 27th Tobacco Chemists' Research Conference, Winston-Salem, North Carolina, October 3-5, 1973, p. 32.

131. Structure of Dibromoticonine, a Bromination Product of Nicotine. Herbert McKennis, Jr., Edward R. Bowman, Louis D. Quin and Ronald C. Denny. Journal of the Chemical Society, Perkin Transactions I, 2046-2049 (1973).

132 Effects of Isomers of Metanicotine on Smooth Muscle. Herbert McKennis, Jr., Raymond S. L. Chang, Edward R. Bowman and Kendall L. Wilson, Jr. Federation Proceedings 33, 470 (1974).

133. Synthesis of Trans-4-(3-Pyridyl-3-Butenoic Acid, A Metanicotine Metabolite. C. T. Sprouse and Herbert McKennis, Jr., Virg. J. Sci. 24, 220 (1973).

134. Effects of Isomers of metanicotine on smooth muscle. Herbert McKennis, Jr., Raymond S. L. Chang, Edward R. Bowman and Kendall L. Wilson, Jr. Federation Proceedings, 33, 470, 1974.

135. Effects of 3-pyridylacetic acid and its glycine conjugate on free fatty acids in rabbit epididymal fat pads. Faye J. Bowman, E. R. Bowman and Herbert McKennis, Jr., IRCS Journal of Medical Science: Biochemistry; Metabolism and Nutrition; Pharmacology, 3, 65, 1975.

136. Nicotine-like actions of cis-metanicotine and trans-metanicotine. Kendall L. Wilson, Jr., Raymond S. L. Chang, Edward R. Bowman and Herbert McKennis, Jr. Journal of Pharmacology and Experimental Therapeutics, 196, 685-696, 1976.

137. Studies on the distribution and excretion of nicotine isomethonium-^{14}C-methyl ion in the mouse. Herbert McKennis, Jr., Eskil Hansson, John P. Bederka, Jr., Edward R. Bowman and C. G. Schmiterlow. Abstracts of Papers, 29th Tobacco Chemists' Research Conference, College Park, Maryland, October 8-10, 1975.

138. Role of pyridine-N-methylation in the urinary elimination of nicotine and its metabolites. H. McKennis, Jr., J. P. Bederka, Jr., E. R. Bowman, F. J. Bowman, C. G. Schmiterlöw and E. Hansson. Abstracts of Papers, 27th Southeast-31st Southwest Meeting, American Chemical Society, Memphis, Tenn., October 29-31, 1975.

139. Experimental considerations of some alternate routes in the mammalian metabolism of nicotine. Herbert McKennis, Jr. Beitrage zur Tobakforschung, 8, 339-349 (1976).

140. Studies on the identification of tobacco alkaloids, their mammalian metabolites and related compounds by gas chromatography-mass spectroscopy. Ake Pilotti, Curt R. Enzell, Herbert McKennis, Jr., Edward R. Bowman Eva Dufva, and Bo Holmstedt. Beitrage zur Tobakforschung, 8 288-289 (1976).

141. Interrelationship between the metabolism of (S)-cotinine-N-oxide and (S)-cotinine. J. Mark Yi, C. T. Sprouse, Edward R. Bowman, and Herbert McKennis, Jr., Drug Metabolism and Disposition. 5:355, 1977.

142. Participation of pyridine-N-oxides in the metabolism in nicotine in vivo - a preliminary study. Abstracts of Papers. Herbert McKennis, Jr., Edward R. Bowman, J. Mark Yi, and C. T. Sprouse, Second International Symposium on the Biological Oxidation of Nitrogen in Organic Molecules, University of London, London, England, September 19 - 23, 1977, p. 25.

143. Conjugates of 3-pyridylacetic acid and its N-oxide in relationship to the metabolism of nicotine. Herbert McKennis, Jr. and Edward R. Bowman. Abstract of Paper presented at the 1977 Annual Meeting of the Southeastern Section of The Society for Experimental Biology and Medicine, October 28 - 29, 1977, University of Florida.

144. Synthesis and properties of 2- and 6-aminonicotine. J. Mark Yi, J. S. McKennis, Edward R. Bowman, and Herbert McKennis, Jr., The Virginia Journal of Science, 28:85, 1977.

145. Participation of pyridine-N-oxides in the metabolism of nicotine in vivo - a preliminary study. Herbert McKennis, Jr., Edward R. Bowman, J. Mark Yi, and C. T. Sprouse. "Biological oxidation of nitrogen", Oxford, England, 1978, p. 163, John N. Gorrod , ed.

146. Racemization and resolution of nicotine and related compounds. Herbert McKennis, Jr. and Edward R. Bowman. Abstract of Paper. Proceedings of 32nd Tobacco Chemists' Research Conference, Montreal, Canada, October 30 - November 1, 1978, p. 34.

147. Metabolic relationships between cotinine and 4-(3-pyridyl)-4-methylaminobutyric acid. Herbert McKennis, Jr., Edward R. Bowman, and Richard M. Lane, Federation Proceedings, 38:584 (1979).

148. Automated radioimmunoassay of nicotine. A. Castro, N. Monji, H. Malkus, W. Eisenhart, H. McKennis, Jr., and E. R. Bowman, Clinica Chemica Acta, 95:473, 1979.